

ENGR335 **THE FOUNTAIN EXPERIMENT** (HW set 13) FALL 2006

- 1) Make a sketch of the fountain apparatus. Label all pertinent dimensions.
- 2) We will measure the height attained by the fountain in class for two different tank levels. Record these values.
- 3) Calculate the exit velocity at the nozzle by the Bernoulli equation.
- 4) Calculate the theoretical height of the water stream by applying the Bernoulli equation. Do you expect the theoretical height to be greater than, equal to, or less than the measured height? Why? Compare your theoretical results to the measured results and discuss.
- 5) The water stream has a certain diameter at the nozzle, D_{noz} . It also has a diameter at the point where it passes through the maximum height, D_{top} . Is D_{top} greater than, equal to, or less than D_{noz} ? Describe your reasoning on this result.
- 6) Work problem 5.91 as the other part of HW set 13.